

What is claimed is:

1. An automatic software component creating system comprising:

a software component definition data storage section which stores software component definition

5 data therein;

a software component creation rule storage section which stores software component creation rules therein;

a client program creation rule storage section
10 which stores client program creation rules therein;

a software component creating section which creates a software component module with one or more software components based on said software component definition data and said software component creation

15 rules in response to a start instruction; and

a client program creating section which creates a client program source code based on said software component definition data, said software component module, and said client program creation rules, when
20 said software component module is created.

2. The automatic software component creating system according to claim 1, wherein said software component definition data includes one module data which includes at least one component data, which

5 includes at least one method data, which includes at

2025 RELEASE UNDER E.O. 14176

least one parameter data.

3. The automatic software component creating system according to claim 2, wherein said module data has a module name,

5 said component data has component data and component attribute data,

 said method data has a method name, method attribute data, method call format data, and method call order data, and

10 said parameter data has a parameter name, a parameter type, and a parameter type data.

4. The automatic software component creating system according to claim 2, further comprising:

5 a software component defining section which defines said software component definition data from inputted data to store in said software component definition data storage section.

5. The automatic software component creating system according to claim 4, wherein said software component defining section comprises:

5 a component data defining section which defines said component data associated with said module data from said inputted data;

 a method data defining section which defines

100-12345650

said method data associated with said component data
from said inputted data; and

10 a parameter data defining section which defines
said parameter data associated with the method data
from said inputted data.

6. The automatic software component creating
system according to claim 1, wherein said software
component creating section comprises:

5 a parameter creating section which creates
parameter(s) from said software component definition
data and parameter creation rules in response to a
parameter creation request;

10 a method creating section which generates said
parameter creation request which creating method(s)
from said software component definition data and
method creation rules in response to a method creation
request;

15 a component creating section which generates
said method creation request while creating
component(s) from software component definition data
and component creation rules in response to a
component creation request; and

20 a module creating section which generates said
component creation request while creating said
software component module from said software component
definition data and module creation rules.

SEARCHED INDEXED COPIED SERIALIZED FILED

7. The automatic software component creating system according to claim 6, wherein said software component creation rules comprises:

5 said module creation rules, in each of which a rule for creation of a project file of said module is described;

10 said component creation rules including component framework creation rules in each of which a rule for creation of a framework of said component is described, property creation rules in each of which a rule for creation of property of said component is described, and initial value creating rules, in each of which initial values to be set in said property are described;

15 said method creation rules including method framework creation rules in each of which a rule for creation of a framework of said method is described, and method logic creation rules in each of which logic to be executed by said method is described; and

20 said parameter creation rules in each of which it is described that a parameter name and a type of parameter are linked.

8. The automatic software component creating system according to claim 1, wherein said client program source code creating section comprises:

a parameter definition creating section which

5 creates declaration and definition of each of said
parameters corresponding to a method to be called from
a client program from said software component
definition data and parameter definition creation
rules of said client program creation rules in
10 response to a parameter definition creation request;

a pre-process creating section which creates a
pre-process which needs to be executed prior to a call
of said software component based on said software
component definition data and pre-process creation
15 rules of said client program creation rules in
response to a pre-process creation request;

a component call creating section which creates
a call process of each of said methods of said
software component based on said software component
20 definition data and component call creation rules of
said client program creation rules in response to a
component call creation request; and

a post-process creating section which creates a
post-process, which needs to be executed after the
25 call of said software component based on said software
component definition data and post-process creation
rules of said client program creation rules in
response to a post-process creation request; and

a client module creating section which creates
30 a framework of said client program source code based
on said software component definition data and client

module creation rules of said client program creation
rules while respectively outputting said parameter
definition creation request, said pre-process creation
35 request, said component call creation request and said
post-process creation request to said parameter
definition creating section, said pre-process creating
section, said component call creating section, and
said post-process creating section.

9. An automatic software component creating method comprising the steps of:

(a) creating a software component module with one or more software components based on software
5 component definition data and software component creation rules in response to a start instruction; and
(b) creating a client program source code based on said software component definition data, said software component module, and client program creation
10 rules, when said software component module is created.

10. The automatic software component creating method according to claim 9, wherein said software component definition data includes one module data which includes at least one component data, which
5 includes at least one method data, which includes at least one parameter data.

2025 RELEASE UNDER E.O. 14176

11. The automatic software component creating method according to claim 10, wherein said module data has a module name,

5 said component data has component data and component attribute data,

 said method data has a method name, method attribute data, method call format data, and method call order data, and

10 said parameter data has a parameter name, a parameter type, and a parameter type data.

12. The automatic software component creating method according to claim 10, further comprising the step of:

5 (c) defining said software component definition data from inputted data.

13. The automatic software component creating method according to claim 12, wherein said (c) defining step comprises the steps of:

 defining said component data associated with 5 said module data from said inputted data;

 defining said method data associated with said component data from said inputted data; and

 defining said parameter data associated with the method data from said inputted data.

14. The automatic software component creating method according to claim 9, wherein said (a) creating step comprises the steps of:

(d) generating a component creation request
5 while creating said software component module from said software component definition data and module creation rules of said software component creation rules;

(e) generating a method creation request while
10 creating component(s) from software component definition data and component creation rules of said software component creation rules in response to said component creation request;

(f) generating a parameter creation request
15 which creating method(s) from said software component definition data and method creation rules of said software component creation rules in response to said method creation request; and

(g) creating parameter(s) from said software
20 component definition data and parameter creation rules in response to said parameter creation request.

15. The automatic software component creating method according to claim 9, wherein said (b) creating step comprises the steps of:

(h) creating declaration and definition of each
5 of said parameters corresponding to the method to be

DOCUMENT E9920060

called from a client program from said software component definition data and parameter definition creation rules of said client program creation rules in response to a parameter definition creation
10 request;

(i) creating a pre-process which needs to be executed prior to a call of said software component based on said software component definition data and pre-process creation rules of said client program
15 creation rules in response to a pre-process creation request;

(j) creating a call process of each of said methods of said software component based on said software component definition data and component call
20 creation rules of said client program creation rules in response to a component call creation request; and

(k) creating a post-process, which needs to be executed after the call of said software component based on said software component definition data and
25 post-process creation rules of said client program creation rules in response to a post-process creation request; and

(l) creating a framework of said client program source code based on said software component
30 definition data and client module creation rules of said client program creation rules while generating said parameter definition creation request, said pre-

40000000000000000000000000000000

process creation request, said component call creation request and said post-process creation request.